NT$113,100, and NT$6,556, respectively. The 2nd year average total medical costs associated with MI, angina and stroke were NT$63,365, NT$33,469 and NT$52,513, respectively. **CONCLUSIONS:** Medical costs associated with cardiovascular diseases were substantial to the National Health Insurance program in Taiwan. These results indicate potential benefits from interventions aimed at preventing the risk factors of cardiovascular diseases such as hypertension, hyperlipidemia, and hyperglycemia.

### PCV27
### EXAMPLE OF ANALYSIS UTILIZING REAL WORLD DATA: MEDICAL COST REDUCTION BY ADVISING UNTREATED-HYPERTENSION PATIENTS TO VISIT DOCTORS

Iwasaki K, Kogo N, Dei M
*Milliman Inc., Tokyo, Japan*

**OBJECTIVES:** We define patients who have not consulted doctors to treat their hypertensions, while they have learned their blood pressure levels are high through health check-up, as untreated-hypertension patients. Our research objective is to calculate using real world data how much lower the medical cost would be if the untreated-hypertension patients visit doctors in response to suggestions to do, which represents the cost reduction of cost-effectiveness analysis. **METHODS:** We used the data of Japan Medical Data Center (JMDC), which provides health insurance claims data with linked health check-up data of 1.7 million members from health insurance societies in Japan. **RESULTS:** It is estimated there are around 705 untreated-hypertension patients in a virtual (yet supposed-to-be typical according to the JMDC data) health insurance society with 10,000 members. They would leave their conditions as they are for an average of 6 years knowing that their blood-pressure levels are high. It is necessary to advise untreated-hypertension patients to visit doctors for treatment. Such advices should be able to start their hypertension treatment in early stages and prevent them from future complicating diseases. According to our calculation, the medical cost after taking antihypertensive would increase by 11% without aging factors by leaving their untreated-hypertension conditions for one year. **CONCLUSIONS:** If the virtual health insurance society had all the existing patients with mid-level (160/100 or higher) high blood pressures visit doctors right now, their monthly medical cost would be 0.71 million yen lower against the amount they had to pay in the future (averagely in 3 years) if they continue to avoid visiting, which represents 71 yen a month per member, and had all the existing patients with mid-level high blood pressures visit doctors retrospectively, its monthly medical cost would have been 0.52 million yen lower now. This amount represents 52 yen a month per member.

### PCV28
### ANTITHROMBOTIC THERAPY AND DIRECT MEDICAL COSTS IN PATIENTS WITH ACUTE CORONARY SYNDROME IN SHANGHAI, CHINA

Guo JJ[1], Liu L[2], Du W[3], Peng H[4], Wang R[4], Xin P[5], Chen Y[6], Wigle PR[1], Papadimitropoulos M[7]
[1]*University of Cincinnati, Cincinnati, OH, USA,* [2]*Eli Lilly Suzhou Pharmaceutical Co. Ltd., Shanghai, China,* [3]*Shanghai Food & Drug Administration, Shanghai, China,* [4]*University of Cincinnati College of Medicine, Cincinnati, OH, USA,* [5]*Eli-Lilly Company, Shanghai, China,* [6]*Eli Lilly Suzhou Pharmaceutical Co., Ltd., Shanghai, China,* [7]*Eli Lilly Canada, Toronto, ON, Canada*

**OBJECTIVES:** Acute coronary syndrome (ACS) is a leading cause of morbidity and mortality worldwide. This study aims to describe treatment patterns and disease burden for patients with ACS in Shanghai, China. **METHODS:** A retrospective descriptive cohort study was conducted. Data were obtained from electronic medical records of seven major Shanghai medical centers. Patients who had at least one primary diagnosis of ACS between January 2006 and July 2012 were included in the study. Patient ACS-related antithrombotic medication use, laboratory tests, key comorbidities, health care utilization and direct medical costs were examined. Log-linear regression was conducted to explore the factors associated with total direct medical cost. **RESULTS:** A total of 6,601 patients were included with mean age of 69.7 (±SD12.5), 73% male and 10% mortality rate. 18.2% of studied patients had diabetes as a comorbidity, 21.2% had hypertension, and 8.6% had hyperlipidemia. 6,466 (98.0%) of patients had been hospitalized for ACS with mean 14.0 (±16.4) days per hospitalization. There were 1,022 patients (15.5%) presented to emergency department. Of those, 93.5% received any antithrombotic therapy, including 92.8% with antiplatelet agents and 20.8% with anticoagulants. The ACS-related direct medical costs were RMB19,421 (±24,741) per hospitalization with medication of RMB6,798 and lab tests of RMB1,355, and RMB2,894 (±7,060) per outpatient visit with medication of RMB624 and lab tests of RMB464. The higher direct medical cost was associated significantly ($p<0.01$) with aging, being male, antiplatelet and anticoagulant uses, diabetes, stroke, hyperlipidemia, hypertension, and chronic kidney diseases. **CONCLUSIONS:** Antithrombotic therapeutic treatments were commonly used among ACS patients in Shanghai, China. ACS poses significant disease burden to the health care system and patients. The higher treatment cost for patients with ACS involves antithrombotic use and key comorbidities.

### PCV29
### HOW LIKELY WARFARIN PHARMACOGENETIC TEST TO BE COST-EFFECTIVE IN THAILAND: A THRESHOLD ANALYSIS

Chong HY[1], Saokaew S[2], Dumrongprat K[3], Permsuwan U[4], Sritara P[5], Chaiyakunapruk N[1]
[1]*Monash University Malaysia, Selangor, Malaysia,* [2]*University of Phayao, Muang, Phayao, Thailand,* [3]*Cardiff University, Cardiff, UK,* [4]*Chiang Mai University, Chiang Mai, Thailand,* [5]*Mahidol University, Bangkok, Thailand*

**OBJECTIVES:** Our economic evaluation of warfarin pharmacogenetic (PGx) test revealed that the test was not cost-effective in Thailand, based on input parameters derived from a meta-analysis of Caucasians-dominant studies for the relative risk (RR) of major bleeding in variant genotypes of *CYP2C9* [2.19, 95%CI (1.33-3.60)] and *VKORC1* [1.08, 95%CI (0.55-2.10)]. Considering this limitation and the high prevalence of *VKORC1* variant genotype in Thailand, this study aimed to determine the threshold value of the RR of major bleeding for *VKORC1* variant genotypes leading PGx test to be cost-effective. **METHODS:** We conducted a literature search for local and international publications investigating the relationship of *VKORC1* genotype and the risk of major bleeding in warfarin users. Additionally, interviews with local key cardiologists were undertaken. A threshold analysis was performed for patients aged 45 years old using the previously constructed decision analytic model. The model was populated from the societal perspective. Input data were obtained from literature review, meta-analysis, and electronic hospital database analyses. Incremental cost-effectiveness ratios (ICERs) were presented as year 2013 values. **RESULTS:** Literature search and interviews identified no local evidence on the relationship of *VKORC1* genotype and the RR of major bleeding in warfarin users. In base-case analysis, PGx results in 0.00198 QALY gained, and increases costs by 2,953.23 THB (98.44 USD) compared with UC (ICER 1,494,707.9 THB [49,823 USD] per QALY gained). In order for the PGx test to be cost-effective, the RR for major bleeding in *VKORC1* variant genotype needs to be shifted from 1.08 (base-case) to 4.15. **CONCLUSIONS:** Our finding suggests that PGx-guided warfarin dosing is not a cost-effective intervention in Thailand due to low likelihood of the RR for major bleeding in *VKORC1* variant genotype to be as high as 4.15. This evidence can be used to assist policy makers and clinicians in efficiently allocating limited resources.

### PCV30
### COST-EFFECTIVENESS OF TREATING ACUTE CORONARY SYNDROME PATIENTS WITH RIVAROXBAN IN AUSTRALIA

Gao L, Li SC
*University of Newcastle, Callaghan, Australia*

**OBJECTIVES:** Rivaroxaban is a new oral anticoagulant subsidised on the Australian Pharmaceutical Benefits Scheme (PBS) for prevention of stroke or systemic embolism in patients with non-valvular atrial fibrillation or undergoing hip and knee replacement. Recent randomized controlled trials (RCTs) have demonstrated its efficacy and safety in treating patients with acute coronary syndrome (ACS). The aim of this study was to assess the long-term cost-effectiveness of treating patients with ACS with rivaroxaban for a 12 month period and modelling the lifetime costs and benefits from a third party payer perspective. **METHODS:** A two-part decision model was constructed to compare treatment with rivaroxaban or current treatment for patients with ACS. The first part was a decision-tree model comprising four health states (no event, non-fatal MI, non-fatal stroke, death) adopted to simulate treatment outcomes based on the event rates reported in the RCTs) health care costs (PBS, hospital cost weights) and quality of life weights (from published literature) for 12 months. Beyond 1-year, treatment outcomes were estimated via a Markov model, with lifetime costs, and quality adjusted life years (QALYs) estimated for both arms and an Incremental cost-effectiveness ratio (ICER) estimated. A series of sensitivity analyses were performed to test the robustness of the result. **RESULTS:** One-year treatment with rivaroxaban was associated with both incremental cost and QALY (AUD 30688 vs. 30101, 17.51 vs. 17.39 for rivaroxban and placebo respectively) over lifetime horizon in the baseline analysis. The ICER of rivaroxaban comparing to placebo was AUD 4896 per QALY gained. The probabilistic sensitivity analysis varying the event transition probability also showed consistent results. **CONCLUSIONS:** Based on clinical and health economic evidence, treating ACS patients with rivaroxaban for 12 months was associated with an ICER of AUD 4896/QALY, which is below the Willingness-to-pay per QALY threshold in Australia inferred from published literature.

### PCV31
### COST–EFFECTIVENESS OF CLOPIDOGREL-ASPIRIN VERSUS ASPIRIN ALONE FOR ACUTE TIA AND MINOR STROKE

Pan Y[1], Wang YL[1], Liu G[1], Zhao K[2], Wang Y[1]
[1]*Beijing Tiantan Hospital, Capital Medical University, Beijing, China,* [2]*National Health and Family Planning Commission, Beijing, China*

**OBJECTIVES:** Treatment with the combination of clopidogrel and aspirin taken soon after a transient ischemic attack (TIA) or minor stroke was shown to reduce the 90-day risk of stroke in a large trial in China, but the cost-effectiveness is unknown. This study sought to estimate the cost-effectiveness of clopidogrel-aspirin regimen for acute TIA or minor stroke. **METHODS:** A Markov model was created to determine the cost-effectiveness of treatment of acute TIA or minor stroke patients with clopidogrel-aspirin compared with aspirin alone. Inputs for the model were obtained from clinical trial data, claims databases, and the published literature. The main outcome measure was cost per quality-adjusted life-years (QALYs) gained. One-way and multivariable probabilistic sensitivity analyses were performed to test the robustness of the findings. **RESULTS:** Compared to aspirin alone, clopidogrel-aspirin resulted in a lifetime gain of 0.037 QALYs at an additional cost of CNY 1250 (US$ 192), yielding an incremental cost-effectiveness ratio of CNY 33,800 (US$ 5200) per QALY gained. Probabilistic sensitivity analysis showed that clopidogrel-aspirin therapy was more cost-effective in 95.7% of the simulations at a willingness-to-pay threshold recommended by the World Health Organization of CNY 105,000 (US$ 16,200) per QALY. **CONCLUSIONS:** Early 90-day clopidogrel-aspirin regimen for acute TIA or minor stroke is highly cost-effective in China. If clopidogrel were generic, treatment with clopidogrel-aspirin would have been cost saving.

### PCV32
### COST-EFFECTIVENESS ANALYSIS OF FONDAPARINUX VERSUS ENOXAPARIN IN NON-ST ELEVATION ACUTE CORONARY SYNDROME IN THAILAND

Permsuwan U[1], Chaiyakunapruk N[2], Nathisuwan S[3], Sukonthasarn A[1]
[1]*Chiang Mai University, Chiang Mai, Thailand,* [2]*Monash University Malaysia, Selangor, Malaysia,* [3]*Mahidol University, Bangkok, Thailand*

**OBJECTIVES:** Non-ST elevation acute coronary syndrome (NSTE-ACS) imposes significant health and economic burden to Thai society. Anticoagulants are recommended as standard therapy by various clinical practice guidelines. With the advent of a new anticoagulant, therefore, this study aimed to determine the cost-effectiveness of fondaparinux versus enoxaparin in the treatment of NSTE-ACS in Thailand. **METHODS:** A two-part construct model composing of a one-year decision tree and a Markov model was developed to capture short and long-term costs and outcomes with the perspective of provider and society. Effectiveness data were derived from OASIS-5 trial while bleeding rates were derived from the Thai Acute Coronary Syndrome Registry (TACSR),